



COLORADO SPRINGS,
COLORADO

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Pikes Peak Radio Amateur Association, Inc.
P. O. Box 16521
Colorado Springs, Colorado 80935

MAY 1996

MEMBER



Amateur Radio News Service



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Ø BEAT



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The Ø-BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., PO Box 16521, Colorado Springs, Colorado 80935. For membership and subscription information see the last page of this publication. The Pikes Peak Radio Amateur Association meets monthly on the second Wednesday of each month at the Disabled American Veterans Hall, Chapter 26, 6880 Palmer Park Blvd. at 7 PM.

Check out the PPRAA page on the World Wide Web! Point your browser to: <http://rainbow.mil.com/~mungele/ppraa/>

Deadline for submission of articles or advertisements is the 20th of each month. Submissions are accepted in any form. Articles should be sent directly to the Ø-BEAT Editor (email to jboyes@kktv.com is preferred.) Permission is granted to reprint articles provided credit is given to both the author and this publication.

Monthly advertising rates: Full page, \$48; Half page, \$24; Quarter page, \$12; Business card, \$6. These rates are billed quarterly. Send your advertisement requests and payments to: PPRAA, PO Box 16521, Colorado Springs, Colorado 80935.

License Exams

License examinations sponsored by the Pikes Peak Radio Amateur Association are held on the 2nd Saturday of February, April, June, August, October, and December.

Testing takes place at 9 A.M. at:

Denver Technical College
225 South Union
Colorado Springs

Everyone is seated on a walk-in basis. Those wishing to take an exam should bring the following items:

1. \$6.05 (preferably a check/money order made out to ARRL/VEC) for any exam other than element 1A or 2.
2. Picture identification.
3. A copy of your current amateur radio license, and/or a copy of any examination credit you have, as well as the signed original. **We keep the copies.**
4. A pen, pencils, and a calculator if you need one.

If you have any questions, call Erik Mugele, KGØXE at 596-5345. Please do not call Denver Technical College.

Committee Chairpersons/Contacts

Activity	Doug Moloney	WBØMHP	590-2757
Auditing			
Historian	Al Craig	N2IWZ	594-9288
Interference	Bill Petty	NØNJX	591-2116
Membership	Les Borst	KCØNC	634-3995
Programs	Doug Moloney	WBØMHP	590-2757
Publicity	Aaron Pelouze	KD6FLM	282-9715
Public Service	Mike Stansberry	KØTER	636-1290
Swapfest	Harvey Hunter	WA3EIB	597-8964
Technical Instruction	Linda Hedges	KBØRKW	520-9238
VE Testing	Erik Mugele	KGØXE	596-5345
Ø-Beat Editor	Jeff Boyes	NØJLH	633-5650

Other Organizational Liaisons

ARES Liaison	Mike Stansberry	KØTER	636-1290
CCARC Liaison	Cory Nelson	KBØNMH	528-6686
RACES Liaison	Larry Dunn	N8HSW	481-0369

Reminder — General Membership Meeting

The next General Membership Meeting of the Pikes Peak Radio Amateur Association will be on the second Wednesday of this month at the Disabled American Veterans Hall, 6880 Palmer Park Blvd. The meeting will start at 7 PM.

Oak Stockton, KØROL, SK

The Pikes Peak region lost a pioneer amateur radio operator in March. Oak Stockton, KØROL, had been active in amateur radio for over 60 years in Colorado. He'll be greatly missed.

According to the records of the PPRAA, Oak was originally licensed in 1936 and had served as secretary in 1971 and as a board member in 1970 and 1985. He also represented the PPRAA to the Colorado Council of Amateur Radio Clubs (CCARC) until May 1995.

Oak retired from the military as a lieutenant colonel after more than two decades in communications. No matter where Oak went or what he did he always managed to bring communications into the picture.

Oak has been well known in recent years for his active ATV pursuits, but he's done much more over the years. Oak was one of the first amateurs to use packet radio in this region.

Oak was also fairly well published, having had several of his antenna articles printed in World Radio. He was also instrumental in getting Wayne Green, W2NSD, editor of 73 Magazine, to print an article describing public service support to the 2nd annual Olympic Sports Festival. As it turned out, ARRL didn't want to print his article in

QST so Wayne Green personally visited Colorado Springs and Oak and several other amateurs including WBØMHP in order to cover the event in 73 Magazine. This festival was spread out over several venues and radio communications made it possible to keep the event together. Oak covered much of the festival using his ATV system.



A prestigious award was created by Oak in February 1994: The Society of the Preservation and Encouragement of Differentiation Between Numeral Zero and Letter O, aka SPEDBNZLO. The certificate was awarded to 22 charter members who had call signs with both the letter O and the numeral Ø. Some of those members are Oak, KØROL; David, NØION; Lauren, KXØO; Renay, KAØROY and Jody, KAØROZ.

Although Oak was not much of an HF operator, he was very active on VHF and above. He was

always looking for new things to build. In the early days of amateur radio, most everything was home brew and Oak never stopped home brewing things.

Despite all of his amateur interests and activities, somehow Oak even managed to mix his non-amateur interests with amateur radio. Some of us never knew that Oak was a barbershop quartet member. But he did manage to bring the barbership quartet and amateur radio together by arranging public service communications for a barbership quartet convention here.

And he shared many of his amateur radio interests in other aspects of his personal life. Oak and Ora, NØQJX, were friends in high school in Georgetown, CO. After high school they went their separate ways, but as fate would have it, they got together again about five years ago and remained together until Oak passed away. Ora is still in the PPRAA and plans to remain in Colorado, although not in Colorado Springs.

This is only a small part of the life of Oak Stockton. There's not enough time or space to tell all.

The amateur community will surely miss Oak.

Pikes Peak Radio Amateur Association

PPRAA General Membership Meeting Minutes, April 10, 1996

The general membership meeting was opened at 1900 hrs by the president Rob Roller WB7WHT upon determining a quorum of the membership was present. Members and guests introduced themselves. The treasurer report was given by Mary, KBØSHP. As of 31 Mar 96, we have a balance of \$2835.64. In Mar, we took in \$557.59 and paid out \$353.05. The minutes of the 13 Mar 96 meeting as published in Ø-Beat were approved.

Committee Reports:

V.E Testing: The next regular VE Test Session will be held at Denver Tech Institute on Union Blvd. on 15 May 96.

Public Service: Mike, KØTER, reported no activities this month.

Ø-BEAT: Everyone is reminded that cutoff date for inputs to the next issue of ZERO BEAT will be 20 Apr.

Programs: Doug, WBØMHP, announced that tonight's program was "1.2 GHz Repeaters" and next month's program would be on the Ultimate Field Day. Doug is still interested in receiving inputs on future programs. There will be a Fox Hunt on Sun, 14 Apr beginning at the Radio Shack on Austin Bluffs. Check-in will start at 1:45.

Swapfest: John, NØVBM, provided an update to the status of the 20 Jul swapfest. Carlos KBØREI, reported ticket sales were just beginning to move but support is needed. We all must get out and sell tickets, if we are to have a successful swapfest.

Skywarn: Training was conducted at the UCCS Science building on Sat 6 Apr 96. There were 78 amateurs present. It was a good session.

Field Day will be at the HP Recreation Area

EOSS: Dave, NØUVR, talked about the EOSS launch this past and the recovery near Punkin Center.

Old Business: Linda, KBØRKW thanked the membership on behalf of the training team for their support. Classes will be starting again. Anyone interested in upgrading please contact Linda.

New Business:

Rob briefed the membership on the Liability insurance situation and the Board action with respect to sponsorship of other organizations.

Hammy Award: was presented by Rob on behalf of Liddy, KBØEBL to Linda, KBØRKW. Congratulations Linda.

Next Board meeting will be at Warren WØYNE's in Black Forest on Monday Apr 15 at 1900 hrs.

Program: 1.2 GHz Repeaters. Warren and Hal talked about the world above 1000 MHz. The new PPFMA repeater was on display. Respectfully submitted by Warren, WØYNE, Secretary

PPRAA Board Meeting Minutes Apr 15, 1996

The Board of Directors meeting held, at the home of Warren, WØYNE, was called to order by Rob, WB7WHT, at 7:00pm.

Present at the meeting were Rob, WB7WHT; Doug, WBØMHP; Warren, WØYNE; Mary, KBØSHP; Ron, NKØP; Jeff, NØWPA; Gloria, NØZFX; Harry, NØSFR; Harv, WA3EIB; John, NØVBM and Aaron, KD6FLM.

Mary, KBØSHP reviewed the financial status of the association. A draft budget was presented. Mary will get with Harv's wife who is an accountant to help finalize the budget for presentation.

A motion was made by Jeff to purchase a portable overhead projector that could be used for presentations at PPRAA meetings. A limit of \$336.88 was set for the purchase. The motion carried.

Harv, WA3EIB, the Swapfest chairman and John, NØVBM briefed on the Swapfest status.

Zero Beat

They are planning to have several training meetings as well as VE testing during the event. Harv has been in touch with several of the vendors and has commitments from several vendors. Ticket sales were discussed. We must all get out and sell tickets if we are to have a successful Swapfest.

Picnic: Ron briefed on the picnic plans as of now. It will be held at the Air Force Academy Picnic area #3. A tailgate type swap will be planned for before or after the food preparation. A motion was made by Jeff to allocate \$250 for picnic expenses. The motion carried. It was suggested and approved that a walking Foxhunt be held in conjunction with the picnic.

Field Day: Jeff briefed on the planning to date of the PPRAA and MARC joint Field Day. He will be meeting with the MARC coordinators to discuss final plans.

Programs: Doug outlined the programs for the May and June meetings. May will include a video on a Tropo test in Alert which is close to the North Pole. June will be the final planning for Field Day which will be 22, 23 and 24 June.

Club assets: The board discussed the PPRAA inventory. It appears the list is still not complete. Doug made a motion that all the PPRAA

assets be tagged with a unique PPRAA tag and placed in a database by 16 Sept 1996. The motion carried.

Publicity: Aaron passed around the final draft of the PPRAA flyer. He is in the process of getting cost to produce 1000 copies. The cost is estimated to be less than \$150. The board will vote at the next meeting when he provides his recommendations.

On a sad note, Bob Hrebek has become a Silent Key. Bob was a good friend to PPRAA. Jeff made a motion that \$50 be allocated as a memorial contribution. Rob will send a card on behalf of the PPRAA. The motion carried.

Being no further business the meeting was adjourned.

Respectfully submitted by Warren, WØYNE, Secretary.

PPRAA Special Board Meeting Minutes - 30 Mar 1996

The special board meeting was called to order at 7:00 PM by Rob Roller, WB7WHT, at his home. Also present were Doug, WBØMHP; Warren, WØYNE; Jeff, NØWPA; Jeff, NØJLH; Ron, NKØP; Les, KCØNC; Renay, KAØROY; and Jody, KAØROZ. Jeff, NØWPA had proxies from

Harry, NØSFP, Mary, KBØSHP and Gloria, NØZFX.

The purpose of the meeting was to discuss the club Liability Insurance policy.

A motion was made by Jeff, NØWPA and seconded that "PPRAA would sponsor the Skywarn training classes to be held on 6 Apr 1996 at UCCS and therefore the PPRAA Liability insurance policy would be provided." After a discussion of the pros and cons, the question was called. The motion carried.

A motion was then made by Doug, WBØMHP, and seconded that: "As of 5 PM on 6 April 1996, PPRAA, as an organization, would no longer sponsor or support the Skywarn or Severe Weather activities. PPRAA does however encourage amateurs to participate as individuals in weather related activities."

The motion was discussed by the board. The question was called and the motion carried.

The meeting was adjourned at 8:00 PM.

Respectfully submitted by Warren, WØYNE, Secretary.



**OM/YL
LUNCH BUNCH**

The May Lunch Bunch will hold this month's get-together at the Country Buffet (in the Citadel Crossing Shopping Center) May 16th.

Come join us at noon time!
Everyone is welcome.

73,
Rosie Calaway, WAØMNL
471-9965

**KCØNC and KAØROZ
Find the Hidden Fox
by Doug Moloney WBØMHP**

Sunday, April 14 – Tax-day eve, was cool and brisk but sunny when Les, KCØNC and Jody, KAØROZ, found WBØMHP's hidden transmitter with the lowest mileage. Doug, WBØMHP hid his mobile in a cul-de-sac across the street from his home QTH and used cross-band from his living room to control the hidden transmitter. The hidden transmitter was only about 1.25 miles line-of-site from the starting point, which proved that reflections are just about everywhere in this area. Lowest mileage was just over 8 miles to find the transmitter.

Finding a fox twice was Dave, NØUVR. Dave ran across a real red fox in a field less than a quarter mile from the hidden electronic fox. Soon after finding the red fox, Dave found WBØMHP's fox. Jeff, NØWPA and Randy, AA9JP (accompanied by his XYL, Anastasia, N9WJB) teamed up and in so doing, chose an intercom frequency on UHF. Little did they know WBØMHP was only a few hundred kHz above their intercom frequency with his cross-band frequency. If they had found the cross-band frequency, they could have brought up the 2-meter hidden transmitter whenever they needed more signal. Who almost out-foxed whom?

Also hunting was another Dave. Dave, NØEOP also found WBØMHP's hidden transmitter with a little help from some of Doug's clues. The fun part was when every one arrived, we all had time for visiting and recapping the routes taken. The confusing part when we all got together was there were two Daves and two Jeffs. Jeff number 2 was NØJLH, who followed Les and Jody. Accompanying Jeff was Renay KAØROY.

When the visiting was over and everyone started for home, it was heard said by one of the hunters, "I just have got to get a beam."

Next month Les, KCØNC will have the honor of hiding, but, it will be on the 19th of May instead of the 12th because of Mother's day. [See Les's article next. Ed.]

**Fox Hunt For May
By Les KCØNC**

The May fox hunt will be held on Sunday the 19th due to Mother's Day on the 12th.

Everyone is to meet in the parking lot at the Radio Shack west of Academy Blvd. on Austin Bluffs. Check-in at 1:45 PM and we'll start at about 2:00 PM.

I will operate the hunt as follows:

Transmissions will start at 2:00 PM. I will be transmitting on 146.58 mhz using 25 watts.

I will be on the air for one minute each 5 minutes there after.

At 3:00 PM I will reduce power to 10 watts.

At 4:00 PM I will reduce power to 5 watts.

I will use the same antenna for the entire hunt and it will not be moved.

As usual I will be located on property that is accessible by conventional vehicles.

The hunter with the lowest mileage will be the winner.

El Paso County HF Roundtable

Sunday evenings just after the El Paso County RACES 7:30 PM (local time) HF net, on 28.385 MHz.

Everyone is invited to check in.

April Program -- Very Informative by Doug WBØMHP

Being a ham for close to 25 years, I hadn't really given much thought to repeaters above 440 MHz so Warren's, WØYNE and Hal's, WØMXY presentation about the 1.2 GHz repeater was very informative. Besides describing the repeater and antennas, Warren and Hal did a great job of describing the propagation properties of 1.2 GHz. Hal also provided a handout listing the surprisingly high number of radios available for 1.2 GHz.

I want to thank Warren and Hal for their presentation and I'm sure if you have additional questions about 1.2 GHz, they would be very happy to answer them. Now comes the inevitable question, "who will be the first to bring their new 1.2 GHz HT or mobile to the club meeting for show and tell?"

Words from the President: By Rob Roller, WB7WHT

WB7 What Happened Ten ...

years ago this month? I thought I'd pull out a back issue of QST and see what's in there. I have the May 1986 issue and the May 1981 issue so I can look back ten and fifteen years. Well, much of the same stuff we're doing now was done ten and twenty years ago.

ARRL membership was \$25 in 1986 and \$18 in 1981. I believe it's \$30 now. First class postage was 18 cents in 1981. Ten and fifteen years ago the Rocky Mountain Division Director was KØPGM and the vice director was Marshall Quiat AGØX. Sound familiar? Marshall is now our division director and Lyle still comes to the division meetings. Our section manager ten years ago was Bill KQØJ and fifteen years ago was WØACD. The only familiar call sign I see in the section notes was Ron, NKØP setting up the hamfest held on May 17, 1986. In 1981 the Sunday morning ARES had been around for 47 years, one of the oldest nets in CO. Back then it was held at 0900 on 29.624 MHz. There was no such thing as a Technician or Novice talking on 10m so there was no voice subband from 28.3 to 28.5 MHz. Rich Ferguson, KAØDXM, our current SEC, was putting together

the Rocky Mtn VHF Society hamfest in May 1981.

One of the newer HF transceivers in 1981 was the Kenwood TS-830S, selling list at \$930. In 1986 the 830S listed for \$949 and the TS-940S listed for 1999.95! You think that was high? Some newer radios now go for over \$5,000 or \$7,000 and up! Heathkit was still building radios but was beginning to lose ground to the more versatile Japanese radios from Yaesu, Kenwood and Icom.

Codeless licenses? It was talked about, but they didn't exist then. There was, however, controversy over new FCC rules permitting licensees to keep their old call signs when moving to a new district. If that were still in existence I'd have a Ø call by now! Some felt it was absurd to live in Colorado and have a 7 call because the call sign numeral was supposed to identify where you were!

The BASIC computer language was in full swing. Program listings for all sorts of stuff were printed. Absolutely no structured programming whatsoever! Packet radio was given a temporary go-ahead in 1986 for relaying third party traffic using automatically controlled packet stations on frequencies above 50 MHz. The big concern by the FCC was that commercial third party traffic could be inserted into packet without a control operator knowing about it.

Pikes Peak Radio Amateur Association

That would have a put a crimp on the NTS as we know it today!

So where was I then? In 1981 I had just passed my Advanced class test, having taken the test during a visit by the FCC to Reno NV. There was no VEC program then so you had to either travel to a FCC testing site or wait for them to come to you. I was a member of the Wide Area Data Group in Reno. In 1986 I was still WB7WHT but living in Bedford MA on an Air Force assignment at Hanscom AFB. I was more active in MARS than amateur radio. Hanscom had a very nice MARS facility with a 2-meter autopatch that gave me not only local but long-distance calling capability as well as access to the AUTOVON network. (AUTOMATIC VOICE Network was basically the precursor to today's DSN network, a military long-distance network.) That autopatch was on military frequencies so I wasn't prohibited from calling the office, since it was official Air Force business. That was nice!

My daughter was 3 months old in May 86 but already listening to my amateur radio. She still hasn't quite developed enough interest in amateur radio, but I'm still working on her.

Some of the things that haven't changed much are antennas and propagation. Antennas still must radiate and the simplest, best antenna then was then dipole as it

is today. Propagation, well, the only difference is where we are in the sunspot cycle. And hams were still giving other hams a hard for bad habits such as saying "for ID" after your call sign. I guess then as now, as W9BCC put it, that "... really implies that the operator doesn't know he is identifying when saying" their call sign. Some things never change.

Eureka! This is...Alert!

by Doug WBØMHP

No, it's not an alert, it's Alert on Ellesmere Island, Northwest Territory, Canada. Eureka is not a cry of surprise, it's a town also located on Ellesmere Island, Northwest Territory, Canada. By now you are probably wondering if I'm just showing off my geography skills but, that's not the case! "Eureka, this is Alert," is what was supposed to be heard on the voice link between Alert and Eureka when a remote high-speed data site was set up and ready to test.

Have you ever seen what the middle of July is like at 82 degrees 17'25" North latitude? Have you ever seen a portable Digital Troposcatter Communications System? Have you ever seen how large a transmitter capable of 1800 Watts at 4.4 GHz is? Have you ever attended special Polar Bear Safety training before field

day? Have ever imagined having field day 300 miles north of magnetic north and on the northern most island on the North American continent?

If you would like to see what life is like for those who installed the equipment and ran the tropo test in July of 1995 from Alert, NWT, Canada, join us at the May meeting for an excellent video and narrative presented by David Yost. David was one of the consultants to Raytheon who went to Alert for this test. He has video of both the Canadian Air Force's Arctic Training and Orientation as well as actual footage of the installation and testing of the equipment.

So don't miss this opportunity to see things you just wouldn't believe without seeing!

Welcome Our New Members

Jerald Gainer KC7GOL 391-2567
Dennis Major KBØSXC 531-6774
Danny Maupin KDØOL 596-0015
Wolfgang Schaefer 596-6136

Hey! YOU!

Are you currently storing any Association property? If so, the PPRAA property custodian, Mike Stansberry KØTER, wants to know about it. Please give Mike a list of the property you are storing, as well as it's condition.

Hams, Hams, and more Hams!
By Frank McNally, KF0WF

Once again another successful Novice/Technician licensing class has come to an end. Fourteen students participated in the Spring 96 Novice/Technician class held at the International Tesla Society in Colorado Springs. Of the fourteen who took the class, eight were successful in earning their Technician class license. Two of the eight are visually handicapped, demonstrating anyone willing to dedicate the time and effort can earn their way into the radio ranks.

Licenses could not have been earned without the help of Elmers who dedicated many hours of their own time to the special needs of the students. Joe Thomas NOYCH and Linda Hedges KB0RKW spent countless hours working with the handicapped students in an effort to provide the additional training needed to ensure each student thoroughly understood the principles and concepts needed to pass the examinations. Each of these Elmers attended the classes with the students and met with them privately for independent study. A heart felt thank you is extended to both of these folks for a job well done.

In addition to the special needs of the handicapped students, Pat Conner KB0REF acted as a liaison with the Handi-hams and coordinated training efforts with both Joe and Linda. In addition, Pat helped Elmer two other class participants who lacked fundamental knowledge of electronic and propagational theory. She attended each class session and also dedicated personal time for individual training.

In the course of the class, a call went out for help to assemble training aides that contained individual discreet electronic components and circuits that could be used to demonstrate the concepts presented in class. Jake Jacobs NOCYR volunteered to put resistors, capacitors and inductors on bread boards to enhance the diagrams given in the text book. He constructed simple circuits consisting of light bulbs and resistors that could be used to make voltage and current measurements. These tools have gone a long way to reinforce the training material used in the past. Thank you Jake.

As part of the class curriculum, the class is given a demonstration of the Southern Colorado Traffic Net. This net is held every evening at 8 pm. Roger French KB0RLF has been very gracious

to conduct the net from the Tesla Society for the demonstration. It is indeed a pleasure to watch a pro at work and a treat for the students to witness the broad range of amateur radio involvement within community affairs. Thanks to all who handled the class traffic that evening and to Roger for a job well done.

Of course, the training is only half of the job. A special thanks is extended to the VE test team members who continue to support the testing needs for these classes. Erik Mugele KG0XE, VE team coordinator, and Bill Stanfill K4YCD, VE team liaison, continue to meet the out of cycle test requirements. This class required two copies of the Novice and Technician examinations in Braille for our visually challenged students. These were in addition to the normal 810's and written test materials. And of course we need to mention the VE team members who made special arrangements to support the testing effort. Thanks to everyone.

In conclusion, It takes allot of personal time and devotion by many individuals to make the amateur radio classes in Colorado Springs a reality. The rewards are great once you hear the new amateurs making their first contacts on the air and entering a

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new realm of a great hobby. Our first blind student, Melinda Koons KB0UVG, has taken to the air as an old pro and is actively pursuing the hobby in Phoenix, Arizona. Quite often she can be heard over the Zia Link connection here in Colorado Springs. It has been report that she is now learning morse code in order to broaden her operating privileges and allow her access to the world below 6 meters. We wish her good luck in her endeavors. A special thanks again to Joe NOYCH, Linda KB0RKW, Pat KB0REF and Roger KB0RLF for all their support; and, who are graduates of the Amateur Radio Classes themselves.



Dits and Bits

Estate Sale (WDØK):

Drake R-4B, T-4XB, MS-4
Radio Shack 21-622 Meter
Shure 444 Desk Mic
Three J-38 Keys
CDE AR-10 Rotor (2 controls)
VibroPlex Key #161062
Two Headphone Sets
Approx. 25' homemade tower
3 Element Tri-band beam (Brand Unknown)
Approx. 75' RG-8 coax
GPX Compact stereo system
Misc. books and magazines
Les, KCØNC, 634-3995

For Sale:

Kenwood TS440S - \$850.00 (With Ext. Tuner - \$950.00)
Frank, KL7IPV, 570-1335 T-F 10AM - 5:30PM or 597-2406 Evenings.

For Sale:

Heathkit SB-102 with SB-600 speaker, HP-23 AC Power Supply, EV-638 mike.
Halcrafters S-40B Comm Rcvr
Trinetics DL-1000 Dummy Load
Radio Shack 19 ft. push-up mast
Ringo Ranger II 2M Vertical Ant
MFJ-922 Versa Tuner
Buttemut HF-6V HF Vert Ant
Santec ST-144 2M Handheld
Astron RS-12A Power Supply
Icom IC-730 HF Xcvr
Bud, NØDDF, 475-0537

For Sale:

Uniden Bearcat 100XL
programmable 16 channel
handheld scanner with case,
charger, instructions. \$60.00
Kantronics KAM version 5.0 with
all manuals and some connecting
cables. Asking \$200.00
Hamstick mobile antennas:
9175 (75M,) 9140 (40M,) 9120
(20M,) 9007 (2M collinear.) Also a
Radio Shack stainless steel 10-
11M whip. Asking \$5.00 each.
Steve, KØCI, 598-3554

For Sale:

Tri-Band beam, Rotor, and 40 ft
tilt-over tower - \$250.00
Don KEØWC, 683-2883

Wanted:

1920's Transmitters
Old Photographic Equipment
Harry Gray, WAØTHB

[Remember: Items submitted for Dits & Bits will only be printed in one issue unless prior arrangements have been made. Ed.]

Remember:

The deadline for
submission of articles
for the **0-Beat** is the
20th of each month.

See you at the meeting!

This space could have
(should have?)
been yours!!



Remember, this is
our
newsletter! Contact the Editor (listed
on the inside front cover) if you have
any suggestions!

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Address _____

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Call _____ LicenseClass _____ Telephone _____

Are you an ARRL member? Yes _____ No _____

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Over 65 \$12.00 _____ Family Both over 65 \$12.00 _____

Associate (outside El Paso or Teller Co.) \$12.00 _____ Newsletter only \$12.00 _____

Additional Names: _____ Call _____ Class _____

IF THIS IS A RENEWAL PLEASE CHECK HERE: _____

PLEASE TYPE OR PRINT CLEARLY!

Please note: Please submit a completed application form along with your check to the treasurer. This applies to new membership as well as renewals. Thank you.